

What is claimed is:

1. A protein having the amino acid sequence composed of 229 amino acids represented by the 1st to 229th amino acids of SEQ ID NO: 2; or a protein having an amino acid sequence derived from the amino acid sequence represented by the 1st to 229th amino acids of SEQ ID NO: 2 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the 1st to 229th amino acids of SEQ ID NO: 2; or a modified derivative thereof.

2. A nucleotide sequence represented by the 272nd to 958th bases of SEQ ID NO: 1; a nucleotide sequence encoding the amino acid sequence represented by the 1st to 229th amino acids of SEQ ID NO: 2; or a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the 1st to 229th amino acids of SEQ ID NO: 2.

3. A protein having the amino acid sequence composed of 229 amino acids represented by the 1st to 229th amino acids of SEQ ID NO: 4; or a protein having an amino acid sequence derived from the amino acid sequence

represented by the 1st to 229th amino acids of SEQ ID NO: 4 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the 1st to 229th amino acids of SEQ ID NO: 4; or a modified derivative thereof.

4. A nucleotide sequence represented by the 244th to 930th bases of SEQ ID NO: 3; a nucleotide sequence encoding the amino acid sequence represented by the 1st to 229th amino acids of SEQ ID NO: 4; or a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the 1st to 229th amino acids of SEQ ID NO: 4.

5. A protein having the amino acid sequence composed of 282 amino acids represented by the -53rd to 229th amino acids of SEQ ID NO: 2; or a protein having an amino acid sequence derived from the amino acid sequence represented by the -53rd to 229th amino acids of SEQ ID NO: 2 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the -53rd to 229th amino acids of SEQ ID NO: 2; or a modified

derivative thereof.

6. A nucleotide sequence represented by the 113th to 958th bases of SEQ ID NO: 1; a nucleotide sequence encoding the amino acid sequence represented by the -53rd to 229th amino acids of SEQ ID NO: 2; or a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the -53rd to 229th amino acids of SEQ ID NO: 2.

7. A protein having the amino acid sequence composed of 250 amino acids represented by the -21st to 229th amino acids of SEQ ID NO: 2; or a protein having an amino acid sequence derived from the amino acid sequence represented by the -21st to 229th amino acids of SEQ ID NO: 2 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the -21st to 229th amino acids of SEQ ID NO: 2; or a modified derivative thereof.

8. A nucleotide sequence represented by the 209th to 958th bases of SEQ ID NO: 1; a nucleotide sequence encoding the amino acid sequence represented by the -21st to 229th amino acids of SEQ ID NO: 2; or a nucleotide

sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the -21st to 229th amino acids of SEQ ID NO: 2.

9. A protein having the amino acid sequence composed of 249 amino acids represented by the -20th to 229th amino acids of SEQ ID NO: 4; or a protein having an amino acid sequence derived from the amino acid sequence represented by the -20th to 229th amino acids of SEQ ID NO: 4 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the -20th to 229th amino acids of SEQ ID NO: 4; or a modified derivative thereof.

10. A nucleotide sequence represented by the 184th to 930th bases of SEQ ID NO: 3; a nucleotide sequence encoding the amino acid sequence represented by the -20th to 229th amino acids of SEQ ID NO: 4; or a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the -20th to 229th amino acids of

SEQ ID NO: 4.

11. A protein having the amino acid sequence composed of 276 amino acids represented by the -47th to 229th amino acids of SEQ ID NO: 4; or a protein having an amino acid sequence derived from the amino acid sequence represented by the -47th to 229th amino acids of SEQ ID NO: 4 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the -47th to 229th amino acids of SEQ ID NO: 4; or a modified derivative thereof.

12. A nucleotide sequence represented by the 103rd to 930th bases of SEQ ID NO: 3; a nucleotide sequence encoding the amino acid sequence represented by the -47th to 229th amino acids of SEQ ID NO: 4; or a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the -47th to 229th amino acids of SEQ ID NO: 4.

13. A protein having the amino acid sequence composed of 254 amino acids represented by the 1st to 254th amino acids of SEQ ID NO: 6; or a protein having an amino acid sequence derived from the amino acid sequence

represented by the 1st to 254th amino acids of SEQ ID NO: 6 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the 1st to 254th amino acids of SEQ ID NO: 6; or a modified derivative thereof.

14. A nucleotide sequence represented by the 114th to 875th bases of SEQ ID NO: 5; a nucleotide sequence encoding the amino acid sequence represented by the 1st to 254th amino acids of SEQ ID NO: 6; or a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the 1st to 254th amino acids of SEQ ID NO: 6.

15. A protein having the amino acid sequence composed of 275 amino acids represented by the -21st to 254th amino acids of SEQ ID NO: 6; or a protein having an amino acid sequence derived from the amino acid sequence represented by the -21st to 254th amino acids of SEQ ID NO: 6 by deletion, substitution or addition of one to several amino acids and having the same property as that of the protein having the amino acid sequence represented by the -21st to 254th amino acids of SEQ ID NO: 6; or a modified

derivative thereof.

16. A nucleotide sequence represented by the 51st to 875th bases of SEQ ID NO: 5; a nucleotide sequence encoding the amino acid sequence represented by the -21st to 254th amino acids of SEQ ID NO: 6; or a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence under stringent conditions and encoding a protein having the same property as that of the protein having the amino acid sequence represented by the -21st to 254th amino acids of SEQ ID NO: 6.

17. A nucleotide sequence represented by SEQ ID NO: 1; or a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence under stringent conditions and encoding a protein having the same property as that of the protein encoded by the nucleotide sequence represented by SEQ ID NO: 1.

18. A nucleotide sequence represented by SEQ ID NO: 3; or a nucleotide sequence hybridizable with a nucleotide sequence which is complementary to the above nucleotide sequence under stringent conditions and encoding a protein having the same property as that of the protein encoded by the nucleotide sequence represented by SEQ ID NO: 3.

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14 and 16-19 in an expressible state.

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25. The process according to any one of claims 22-24, wherein the cells are *E. coli* cells, animal cells or insect cells.

26. A non-human transgenic animal whose
5 expression level of BSSP6 gene has been altered.

27. The non-human transgenic animal according to claim 26, wherein BSSP6 gene is cDNA, genomic DNA or synthetic DNA encoding BSSP6.

28. The non-human transgenic animal according to
10 claim 26, wherein the expression level has been altered by mutating a gene expression regulatory site.

29. A knockout mouse whose BSSP6 gene function is deficient.

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30. An antibody against the protein according to any one of claims 1, 3, 5, 7, 9, 11, 13 and 15 or a fragment thereof.

31. The antibody according to claim 30 which is a polyclonal antibody, a monoclonal antibody or a peptide antibody.

20 32. A process for producing a monoclonal antibody against the protein according to any one of claims 1, 3, 5, 7, 9, 11, 13 and 15 or a fragment thereof which comprises administering the protein according to any one of claims 1, 3, 5, 7, 9, 11, 13 and 15 or a fragment thereof
25 to a warm-blooded animal other than a human being,

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selecting the animal whose antibody titer is recognized, collecting its spleen or lymph node, fusing the antibody producing cells contained therein with myeloma cells to prepare a monoclonal antibody producing hybridoma.

5 33. A method for determining the protein according to any one of claims 1, 3, 5, 7, 9, 11, 13 and 15 or a fragment thereof in a specimen which is based on immunological binding of an antibody against the protein or a fragment thereof to the protein or a fragment thereof.

10 34. A method for determining BSSP6 or a fragment thereof in a specimen which comprises reacting a monoclonal antibody or a polyclonal antibody against the protein according to any one of claims 1, 5, 7, 13 and 15 or a fragment thereof and a labeled antibody with BSSP6 or a
15 fragment thereof in the specimen to detect a sandwich complex produced.

20 35. A method for determining BSSP6 or a fragment thereof in a specimen which comprises reacting a monoclonal antibody or a polyclonal antibody against the protein according to any one of claims 1, 5, 7, 13 and 15 or a fragment thereof with labeled BSSP6 and BSSP6 or a fragment thereof in the specimen competitively to detect an amount of BSSP6 or a fragment thereof in the specimen based on an amount of the labeled BSSP6 reacted with the antibody.

25 36. The method according to any one of claims

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38. The marker according to claim 37 to be used for diagnosis of Alzheimer's disease or epilepsy in brain.

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41. The marker according to claim 27 to be used for diagnosis of prostatic hypertrophy in prostate.

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